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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/301,438	04/28/1999	CHRISTOPHER K. WOLF	NS-3799US	5559

7590 04/30/2004
Ronald J. Meetin
210 Central Avenue
Mountain View, CA 94043-4869

EXAMINER

NGUYEN, STEVEN H D

ART UNIT	PAPER NUMBER
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2665

17

DATE MAILED: 04/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/301,438

Applicant(s)

WOLF ET AL.

Examiner

Steven HD Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12/10/02, 12/23/03 and 2/11/04.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 41-82 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 41-82 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The substitute specification filed 2/11/04 has not been entered because it does not conform to 37 CFR 1.125(b) and (c) because: ***the statement as to a lack of new matter under 37 CFR 1.125(b) is missing.***

Response to Amendment

2. The amendment filed 12/10/03, 12/23/03 and 2/11/04 are objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows:

Page 2, lines 28, “messages about the stored data and their locations in the storage buffer. These message includes tags”.

Page 7, lines 4-5, “which is typically a first in first or (FIFO) buffer” is deleted from the specification.

Page 7, lines 7, page 10, lines 12, 26, 27, page 11, line 30, page 23, 29-30, “FIFO” which is replaced by buffer.

Page 9, lines 30, page 10, lines 7, page 26, lines 30, “video message”.

Page 14, lines 11-13, “the audio bit streams do contain start code patterns but they are not individually uniquely identifiable from the actual audio data, thereby making it difficult to detect the start of audio data frame” is different from the original sentence.

Page 14, lines 23, page 27, lines 3, “audio message”.

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Page 26, lines 12, « consisting ... audio and video messages generating by SD 26 for use by CPU 54”.

Applicant is required to cancel the new matter in the reply to this Office Action.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 41-82 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

As claims 41 and 67, “to demultiplex and depacketize the data packets without interrupting the control unit” does not support by the specification. Please clarify, so the meter and boundary of the claim can be determined.

As claims 41-43, 57, 59, and 67-69, “video message”.

As claims 51-52 and 74-75, “audio message”.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 41-82 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

7. Where applicant acts as his or her own lexicographer to specifically define a term of a claim contrary to its ordinary meaning, the written description must clearly redefine the claim term and set forth the uncommon definition so as to put one reasonably skilled in the art on notice that the applicant intended to so redefine that claim term. *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1357, 52 USPQ2d 1029, 1033 (Fed. Cir. 1999). The term “video messages” in claims 41 and 67 are used by the claim to mean “tags which contain the timing and addresses of storage location for encoded video data in the video buffer”, while the accepted meaning is “video picture.” The term is indefinite because the specification does not clearly redefine the term.

8. Where applicant acts as his or her own lexicographer to specifically define a term of a claim contrary to its ordinary meaning, the written description must clearly redefine the claim term and set forth the uncommon definition so as to put one reasonably skilled in the art on notice that the applicant intended to so redefine that claim term. *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1357, 52 USPQ2d 1029, 1033 (Fed. Cir. 1999). The term “audio messages” in claims 51-52 and 74-75 are used by the claim to mean “audio timing information and the location of encoded audio data in the audio buffer”, while the accepted meaning is “audio data”. The term is indefinite because the specification does not clearly redefine the term.

As claims 41 and 67, “to demultiplex and depacketize the data packets without interrupting the control unit” is vague and indefinite it is a negative limitation. See *In re Schechter*, 205 F.2d 185, 98 USPQ 144 (CCPA 1953) for negative limitation.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 41-52, 55-60, 62-75 and 78-82 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okada (USP 5668601) in view of Maturi (USP 5559999).

Regarding claims 41-52, 55-60, 62-75 and 78-82, Okada discloses A decoder system comprising: a control unit (Fig 1, ref 14); a data buffer comprising a video input buffer (Fig 1, Ref 22) and an audio input buffer (Fig 1, Ref 12); a stream demultiplexer (Fig 1, Ref 5) for receiving an incoming data stream comprising data packets each comprising at least one of (i) encoded video data and a video header that contains video timing information for the encoded video data and (ii) encoded audio data and an audio header that contains audio timing information for the encoded audio data, the stream demultiplexer operating (a) to demultiplex and depacketize the data packets without interrupting the control unit, (b) to send the encoded video data to the video input buffer for storage there without the video timing information (Fig 1, PCR and PTS is extracted from video stream before forwarding to the video buffer 12), (c) to provide, for use by the control unit, video messages which identify where the encoded video data

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is stored in the video buffer and which also deal with the video timing information (See Fig 4, Stage stack), and (d) to send the encoded audio data to the audio input buffer for storage there (Fig 1, audio stream forwards to the buffer by demultiplexing 5); a video decoder that decodes the encoded video data to produce decoded video data utilizing video instructions provided from the control unit as to where the encoded video data is stored in the video input buffer (Fig 1, Ref 23); and an audio decoder that decodes the encoded audio data to produce decoded audio data (Fig 13) and a video output processor for processing the decoded video data to produce processed video data suitable for video presentation and an audio output processor for processing the decoded audio data to produce processed audio data suitable for digital to analog conversion (Fig 1, Ref 13 and 23). However, Okada fails to disclose a step of providing identify where the encoded video data is stored in the video input buffer and audio messages which identify the location of encoded audio data in the audio buffer and PTS and system clock and timer for maintaining local time. In the same field of endeavor, Maturi discloses a method and apparatus for providing the tags to the control unit which contain PTS and location of address buffer for video and audio data (Fig 4) for storing in the RAM; system clock and timer for maintaining local current time (Fig 3, Ref 40) and message queue (Fig 3, Ref 18a) wherein the video decoder decoded the video signal based on interrupt signal in response to sync signal (Fig 7 and col. 6, lines 58 to col. 7, lines 21).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to apply a method of providing a control unit with tags that includes timing and location of the encoded audio and video data as disclosed by Maturi into Okada's system. The motivation would have been to synchronize the video and audio data.

Regarding claims 66 and 82, Okada fails to disclose the claimed invention. However, the examiner takes an official notice that DVB receiver is well known and expected in the art at the time of invention was made. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention was made to apply an interface for receiving a DVB signal into the decoder of Okada and Maturi. The motivation would have been to provide a system with multiple receivers.

11. Claims 53-54 and 76-77 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okada and Maturi as applied to claims 41 and 67 above, and further in view of Nuber (USP 5703877).

Regarding claims 53-54 and 76-77, Okada and Maturi fail to disclose the claimed invention. However, in the same field of endeavor, Nuber discloses an audio decoder detects audio sync words in the encoded audio data and control unit utilizes the audio timing information and the audio sync words provided from the audio decoder to detect presentation times for the decoded data (Fig 4 and col. 4, lines 28-67).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to apply a method of using a sync word and presentation time of data packet for determining the output presentation time for audio data as disclosed by Nubber's system into the decoder of Okada and Maturi. The motivation would have been to synchronize between the audio and video signals.

12. Claim 61 is rejected under 35 U.S.C. 103(a) as being unpatentable over Okada and Maturi as applied to claim 41 above, and further in view of Terashima (USP 6163647).

Regarding claim 61, Okada and Maturi fail to disclose the claimed invention. However, in the same field of endeavor, Terashima discloses the buffers (Fig 1, Ref 13 and 23) for coupling between the audio decoder and video decoder (Fig 1, Ref 12 and 22) and audio processor and video processor (Fig 1, Ref 14 and 24) wherein the audio processor retrieving the decoded audio data from the audio output buffer for processing and input to a audio digital to analog converter (Fig 1, Ref 1) and the video processor retrieving the decoded video data from the video output buffer for processing and input to a video display (Fig 1, Ref 6).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to apply the buffers between the decoders and processors as disclosed by Terashima's system into the decoder of Okada and Maturi. The motivation would have been to synchronize between the audio and video signals.

Response to Arguments

13. Applicant's arguments filed 12/10/03, 12/23/03 and 2/11/04 have been fully considered but they are not persuasive.

In response to pages 11 of the amendment filed on 12/18/03, the applicant states that the audio and video messages are provide to the CPU via buffer message. In reply, the specification states that the SD uses a tag in the message queue for generating an interrupt signal to CPU. The message queue does not provide video or audio message to the CPU for processing (See page 27, lines 7-20 and page 28, lines 8-10).

In response to pages 11-14 of the amendment filed on 12/18/03, the applicant states that "a demultiplex and depacketize the data packets without interrupting the control unit" is not a

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new matter as discloses page 2-3, 7-9, 11-12 and 26-27. In reply, the examiner does not see any thing which discloses "a demultiplex and depacketize the data packets without interrupting the control unit". Furthermore, the specification 26 and 27 clearly discloses the tags used to generate an interrupt signal to CPU during the time that SD demultiplexes and depacketizes the data packets.

In response to pages 14-16, the applicant states audio and audio message which includes the DTS, PTS and address of data stored in the buffer. In reply, Examiner disagrees with the applicant because the specification discloses a tag that includes these items not audio or video message.

In response to applicant's argument in pages 17-21 that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

14. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

In response to applicant's argument in pages 17-21 that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining

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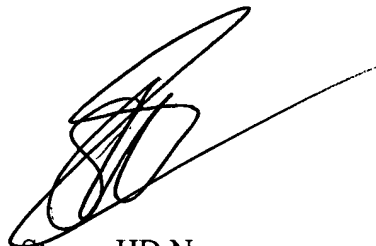
or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Okada discloses a method and system for demultiplexing the mpeg signal into video for storing in buffer 12, audio for storing in buffer 22, video PTS for storing in register 21 and audio PTS for storing in register 11, wherein the PTS is used to generate a tag includes PTS and a address of the video data that stored in the buffer 22 without interrupt the controller, See Fig 4 and 7. Maturi discloses a method and system for demultiplexing and depacketizing the mpeg signal into video data 20b, audio data 20d, video header 20a, audio header 20c, which includes a tag and PTS. Upon detecting the tag and PTS an interrupt signal is forwarded to CPU in order to allow the CPU for storing the information in a list "RAM" to be used by the control unit (See col. 2, lines 65 to col. 3, lines 6; See col. 5, lines 37 to col. 6, lines 48). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to apply a method of providing a control unit with tags that includes timing and location of the encoded audio and video data as disclosed by Maturi into Okada's system. The motivation would have been to synchronize the video and audio data. The teaching of the references performs the claimed invention. Therefore, the rejection is maintained.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven HD Nguyen whose telephone number is (703) 308-8848. The examiner can normally be reached on 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy D Vu can be reached on (703) 308-6602. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Steven HD Nguyen
Primary Examiner
Art Unit 2665
4/28/04